

 <p>FORM PTO-1449</p> <p>U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(Use several sheets if necessary)</p>	ATTY. DOCKET NO. COG-2-0980.02.US	SERIAL NO. 10/707,588
	APPLICANT Tsfai et al.	
	FILING DATE December 23, 2003	GROUP 2611

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		4,121,221	10/1978	Meadows			
		4,599,734	07/1986	Yamamoto			
		4,639,914	01/1987	Winters			
		5,274,844	12/1993	Harrison et al.			
		5,394,435	02/1995	Weerackody			
		5,437,055	07/1995	Wheatley, III			
		5,457,808	10/1995	Osawa et al.			
		5,491,723	02/1996	Diepstraten			
		5,493,307	02/1996	Tsujimoto			
		5,507,035	04/1996	Bantz et al.			
		5,570,366	10/1996	Baker et al.			
		5,577,265	11/1996	Wheatley, III			
		5,610,617	03/1997	Gans et al.			
		5,752,173	05/1998	Tsujimoto			
		5,761,193	06/1998	Derango et al.			
		5,761,237	06/1998	Petersen et al.			
		5,812,531	09/1998	Cheung et al.			
		5,848,105	12/1998	Gardner et al.			
		5,854,611	12/1998	Gans et al.			
		5,898,679	04/1999	Brederveld et al.			
		5,912,921	06/1999	Warren et al.			
		5,539,832	07/1999	Weinstein et al.			
		5,924,020	07/1999	Forssen et al.			
		5,930,248	07/1999	Langlet et al.			
		5,982,327	11/1999	Vook et al.			

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		6,008,760	12/1999	Shattil			
		6,037,898	03/2000	Parish et al.			
		6,038,272	03/2000	Golden			
		6,044,120	03/2000	Bar-David et al.			
		6,058,105	05/2000	Hochwald et al.			
		6,091,934	07/2000	Berman et al.			
		6,097,771	08/2000	Foschini			
		6,118,788	09/2000	Kermani			
		6,122,260	09/2000	Liu et al.			
		6,124,824	09/2000	Xu et al.			
		6,141,393	10/2000	Thomas et al.			
		6,141,567	10/2000	Youssefmir et al.			
		6,144,651	11/2000	Rinchuso et al.			
		6,144,711	11/2000	Raleigh et al.			
		6,147,985	11/2000	Bar-David et al.			
		6,157,340	12/2000	Xu et al.			
		6,157,843	12/2000	Derango et al.			
		6,177,906	01/2001	Petrus			
		6,185,440	02/2001	Barratt et al.			
		6,195,045	02/2001	Xu et al.			
		6,211,671	04/2001	Shattil			
		6,252,548	06/2001	Jeon			
		6,252,884	06/2001	Hunter			
		6,266,528	07/2001	Farzaneh			
		6,295,026	09/2001	Chen et al.			
		6,298,092	10/2001	Heath, Jr.			

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		6,307,882	10/2001	Marzetta			
		6,317,466	11/2001	Foschini et al.			
		6,327,310	12/2001	Hochwald et al.			
		6,331,837	12/2001	Shattil			
		6,023,625	02/2002	Myers Jr.			
		6,349,219	02/2002	Hochwald et al.			
		6,351,499	02/2002	Paulraj et al.			
		6,362,781	03/2002	Thomas et al.			
		6,369,758	04/2002	Zhang			
		6,370,182	04/2002	Bierly et al.			
		6,377,631	04/2002	Raleigh			
		6,377,636	04/2002	Paulraj et al.			
		6,377,819	04/2002	Gesbert et al.			
		6,400,699	06/2002	Airy et al.			
		6,400,780	06/2002	Rashid-Farrokhie et al.			
		6,442,214	08/2002	Boleskei et al.			
		6,462,709	10/2002	Choi			
		6,463,295	10/2002	Yun			
		6,473,467	10/2002	Wallace et al.			
		6,522,898	02/2003	Kohn et al.			
		6,549,786	04/2003	Cheung			
		6,570,929	05/2003	Eriksson			
		6,584,161	06/2003	Hottinen			
		6,636,568	10/2003	Kadous			
		6,646,600	11/2003	Vail et al.			
		6,684,064	01/2004	Kazakevich et al.			

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,687,492	02/2004	Sugar et al.			
		6,728,517	04/2004	Sugar et al.			
		6,862,271	03/2005	Medvedev et al.			
		6,873,606	03/2005	Agrawal et al.			
		6,873,651	03/2005	Tesfai et al.			
		6,940,917	09/2005	Menon et al.			
		6,956,907	10/2005	Ketchum, John W.			
		2001/0012764	08/2001	Edwards et al.			
		2001/0015994	08/2001	Nam			
		2001/0046255	11/2001	Shattil			
		2001/0053143	12/2001	Li et al.			
		2002/0001316	01/2002	Hornsby et al.			
		2002/0024975	02/2002	Hendler			
		2002/0034191	03/2002	Shattil			
		2002/0039884	04/2002	Raynes et al.			
	*	2002/0045435	04/2002	Fantaske			
		2002/0064246	05/2002	Kelkar et al.			
		2002/0067309	06/2002	Baker et al.			
		2002/0072392	06/2002	Awater et al.			
		2002/0085643	07/2002	Kitchener et al.			
		2002/0102950	08/2002	Gore et al.			
		2002/0111142	08/2002	Klimovitch			
		2002/0118781	08/2002	Thomas et al.			
		2002/0122383	09/2002	Wu et al.			
		2002/0122501	09/2002	Awater et al.			
		2002/0127978	09/2002	Khatri			

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2002/0136170	09/2002	Struhsaker			
		2002/0141355	10/2002	Struhsaker et al.			
		2002/0147032	10/2002	Yoon et al.			
		2002/0158801	10/2002	Crilly, Jr. et al.			
		2002/0159537	10/2002	Crilly, Jr.			
		2002/0172186	11/2002	Larsson			
		2002/0172269	11/2002	Xu			
		2002/0196842	12/2002	Onggosanusi et al.			
		2003/0002450	01/2003	Jalali et al.			
		2003/0022693	01/2003	Gerogiokas et al.			
		2003/0032423	02/2003	Boros et al.			
		2003/0048761	03/2003	Jarett			
		2003/0108117	06/2003	Ketchum et al.			
		2003/0114108	06/2003	Frecassetti et al.			
		2003/0125090	07/2003	Zeira			
		2003/0139194	07/2003	Onggosanusi et al.			
		2003/0157954	08/2003	Medvedev et al.			
		2003/0181165	09/2003	Sugar et al.			
		2004/0072546	04/2004	Sugar et al.			
		2004/0104839	06/2004	Valazquez et al.			

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		01/45300	06/2001	WO				
		02/03568	01/2002	WO				

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EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
		"BLAST High-Level Overview", Lucent Technologies, July 18, 2000.
		"Lucent's 'BLAST' Chips to Take Off in Wireless Market", EETimes.com, October 16, 2002.
		Ariyavisitakul et al., "Optimum Space-Time Processors With Dispersive Interference – Unified Analysis And Required Filter Span", 1999 IEEE International Conference On Communications, Vol. 2, pp. 1244-1249, (1999).
		Aziz et al., "Indoor Throughput and Range Improvements Using Standard Complaint AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2", Vehicular Technology Conference, 2002, VTC 2001, October 7-11, 2001, IEEE VTS 54 th , Vol. 4, pp. 2294-2298.
		Bablan et al., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-Part II: Numerical Results"; May 1992; IEEE Transactions on Communications, vol. 30, No. 5; pp. 895-907.
		Briesemeister et al., "Role-Based Multicast in Highly Mobile but Sparsely Connect Ad-Hoc Networks"; First Annual Workshop on Mobile Ad Hoc Networking & Computing; pp. 45-50; August 2000.
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EXAMINER INITIAL	DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
	Golden et al., "V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel", Bell Laboratories, Lucent Technologies, Proc. Int'l Symposium on Advanced Radio Technologies, Boulder, CO, September 10, 1998.
	Golub et al., <u>Matrix Computation</u> , "7.3 Power Iterations", The Johns Hopkins University Press, Second Edition, pp. 351, (1983).
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	Jungnickel et al., "Performance of a MIMO System with Overlay Pilots", IEEE GlobeCom 2001, pp. 594-598.
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EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
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EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
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		Vaidyanathan et al., "The Role In Lossless Systems in Modern Digital Signal Processing: A Tutorial", IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.
		Wallace et al., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University.
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		Yang et al., "Joint Transmitter – Receiver Optimization For Multi-Input Multi-Output Systems With Decision Feedback", IEEE Transactions On Information Theory, Vol. 40, No. 5, pp. 1334-1347, (September 1994).
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